

REMARKS

The indication, by the Examiner, that claims 2-7 and 11-16 set forth allowable subject matter, is noted with appreciation.

Foreign Priority

The acknowledgement, in the Office Action, of a claim for foreign priority under 35 U.S.C. § 119(a)-(d), and that the certified copy of the priority document has been received, is noted with appreciation.

Status Of Application

Claims 1-18 were pending in the application; the status of the claims is as follows:

Claims 1 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,355,224 to Wallace (hereinafter "Wallace");

Claims 8, 9, 17 and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wallace in view of British Patent Application No. 2 123 974 A to Swift (hereinafter "Swift"); and

Claims 2-7 and 11-16 are objected to as being dependent upon rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Drawings

The indication in the Notice of Draftsperson's Patent Drawing Review that the Official Draftsperson has objections to the drawings under 37 C.F.R. § 1.84, is noted. Accordingly, submitted herewith is a Letter to the Official Draftsperson including a new complete set of formal drawings that are believed to be suitable for overcoming the objections to the drawings.

Claim Amendments

Claims 1 and 10 have been amended to more particularly point out and distinctly claim the invention.

Claims 2, 7, 11, and 16 have been rewritten in independent form.

Claim Objections

The objection to claims 2-7 and 11-16, as being dependent upon rejected base claims but being allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims, is noted.

By this Amendment, claims 2, 7, 11, and 16 have each been rewritten in independent form, including all of the limitations of their respective base claim and any intervening claims. Therefore, claims 2, 7, 11, and 16 are considered to be in condition for allowance.

Claims 3-6 depend from claim 2 and claims 12-15 depend from claim 11. Since claims 2 and 11 are considered to be in condition for allowance, claims 3-6 and 12-15 are likewise considered to be in condition for allowance for at least the reason of depending from an allowable claim. Therefore, since claims 3-6 and 12-15 are considered to be in condition for allowance in their present form, rewriting these dependent claims in independent form would involve unnecessary expense and effort.

Accordingly, it is respectfully requested that the objection to claims 2-7 and 11-16 be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

Claims 1 and 10

The rejection of claims 1 and 10 under 35 U.S.C. § 103(a), as being unpatentable over Wallace, is respectfully traversed based on the following.

Claims 1 and 10 each, as amended, recite, *inter alia*:

a hologram combiner comprising **a reflective type hologram and having an optical power for constructing an equivalent surface which is optically equivalent to the image surface at a different position than the image surface** as viewed from the pupil

(emphasis added). Thus, as amended, each of claims 1 and 10 requires that the hologram combiner comprises a reflective type hologram and has an optical power for constructing an equivalent surface to an image surface, but at a different position than the image surface.

Wallace is directed towards a night vision device comprising an optical system for combining an image of a scene viewed by a user with an image representative of information such that, to the user, the information appears to be superimposed upon the scene. In one embodiment ("holographic embodiment"), Wallace discloses using a holographic element 72 for superimposing the information image onto the scene image.¹ However, the present invention as claimed in claims 1 and 10 clearly stands apart from the Wallace holographic embodiment, and thus stands apart from the teachings of Wallace.

For example, Wallace discloses that the optical component layout for the hologram embodiment that is disclosed is arranged "such that the information displayed on display panel 36 is **effectively superimposed** upon the intensified image of the scene viewed by the user."² To this end, Wallace discloses:

¹ Wallace, col. 9, line 38-col. 10, line 17, and Fig. 4.

² Wallace, col. 9, lines 63-66 (emphasis added).

It should be noted that both **the image of the scene** transmitted by viewing optical system 66 **and the illuminated information** transmitted by information display optical system 76 **are simultaneously focused at a common plane 78.**³

Thus, Wallace teaches focusing the information on the same plane (i.e., "a common plane") as the image of the scene, and Wallace teaches that this common plane focusing method is an effective superimposition of the information and the image of the scene. Wallace is silent with regard to focusing the information and the image of the scene in any way other than focusing them a common plane.

In contrast, the present invention as claimed in claims 1 and 10 requires a hologram combiner having an optical power for constructing an equivalent surface to an image surface at a **different position** than the image surface. Since Wallace is silent with regard to the information and the image of the scene being provided in any way other than on a common plane, Wallace certainly cannot render obvious the more specific concept of providing a hologram combiner with an optical power for constructing an equivalent surface at a different position than the image surface. Further, since Wallace discloses that the information is "effectively superimposed" on the scene image by the hologram embodiment where the information and the scene image are focused on a common plane, there is no motivation to modify Wallace to arrive at the invention as claimed in claims 1 and 10.

As yet another example of how the present invention as claimed in claims 1 and 10 clearly stands apart from the teachings of Wallace, the optical system of the Wallace holographic embodiment includes holographic element 72, which is a transmission-type holographic element:

The light reflected by the splitter member is refracted and transmitted by lens 26 to **holographic element 72**, which **performs as a folding mirror with respect to viewing optical system 66**. Holographic element 72 reflects the light from lens 26 to lens 32....

....**Holographic element 72 refracts and transmits the light from**

³ Wallace, col. 9, line 66- col. 10, line 17 (emphasis added).

display panel 36 into the path of viewing optical system 66, such that the information displayed on display panel 36 is effectively superimposed upon the intensified image of the scene.⁴

As this excerpt from Wallace explains, the holographic element 72 transmits the information and superimposes it on the image of the scene. Thus, the holographic element is a transmission-type holographic element. Wallace is silent as to including any type of holographic element other than a transmission-type holographic element. Nevertheless, Wallace discloses that effective superimposition is accomplished using the embodiment with a transmission-type holographic element.

In contrast, the present invention as claimed in claims 1 and 10 specifically requires a hologram combiner comprising a reflective type hologram. Since Wallace is silent with regard to including any type of holographic element other than a transmission-type holographic element, Wallace certainly cannot suggest the more specific requirement of including a reflective type hologram. Further, since Wallace discloses that the information is "effectively superimposed" on the scene image by the hologram embodiment using a transmission-type holographic element, there is no motivation to modify Wallace to arrive at the invention as claimed in claims 1 and 10.

Therefore, since Wallace fails to disclose or suggest all of the limitations of claims 1 and 10, and since there is no motivation for modifying Wallace to arrive at the invention as claimed in claims 1 and 10, Wallace cannot render obvious claims 1 and 10, respectively.

Accordingly, it is respectfully requested that the rejection of claims 1 and 10 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

⁴ Wallace, col. 9, lines 50-65 (emphasis added).

Claims 8, 9, 17, and 18

The rejection of claims 8, 9, 17 and 18 under 35 U.S.C. § 103(a), as being unpatentable over Wallace in view of Swift, is respectfully traversed based on the following.

Claims 8 and 9 depend from claim 1, and claims 17 and 18 depend from claim 10. Accordingly, the discussion above regarding the rejection of claims 1 and 10 over Wallace applies equally to claims 8, 9, 17, and 18. Thus, Wallace alone cannot render claims 8, 9, 17, and 18 obvious for at least the same reasons discussed above regarding claims 1 and 10.

In addition, each of dependent claims 8 and 17 further require that "the viewing optical system is a reverse Galileo type optical system," and each of dependent claims 9 and 18 further require "a relay lens for inverting the image."

The present Office Action acknowledges that Wallace fails to disclose a reverse Galileo type optical system, and Wallace fails to disclose a relay lens for inverting the image. Instead, the present rejection relies on Swift to teach the reverse Galileo type optical system and the relay lens for inverting the image.

However, while it may be argued whether Swift teaches a Galileo type optical system and/or a relay lens in accordance with the present claims, Swift is still unable to cure the deficiencies of Wallace to render obvious claims 8, 9, 17, and 18. For example, Swift, like Wallace, discloses an optical system that uses transmission-type holographic elements to superimpose visual information onto an observer's view:

Such light is received by the **holographic element 5 which comprises a transmission hologram** of negative lens power and therefore has a diverging effect on light rays transmitted through it. After the combiner 4 the light is received by the **holographic element 6 which**

comprises a transmission hologram of positive lens power and therefore has a converging effect on the light rays transmitted through it.⁵

Swift is silent with regard to using any other type of hologram. Thus, not only does Swift fail to suggest including a reflective type hologram, as required by claims 8, 9, 17, and 18, but Swift serves to reinforce the teachings of Wallace as to using transmission type holograms. Thus, Swift certainly provides no motivation to substitute a reflective type hologram for the transmission type holograms taught by both Wallace and Swift.

Therefore, since both Wallace and Swift are silent with regard to including any type of holographic element other than a transmission-type holographic element, the combination of Wallace and Swift certainly cannot suggest the more specific requirement of including a reflective type hologram. Accordingly, since the combination of Wallace and Swift fails to disclose or suggest all of the limitations of claims 8, 9, 17, and 18, and since there is no motivation for modifying Wallace, Swift, or the combination thereof to arrive at the invention as claimed in claims 8, 9, 17, and 18, the combination of Wallace and Swift cannot render obvious claims 8, 9, 17, and 18, respectively.

Accordingly, it is respectfully requested that the rejection of claims 8, 9, 17 and 18 under 35 U.S.C. § 103(a) be reconsidered and withdrawn.

CONCLUSION

Wherefore, in view of the foregoing amendments and remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

This Amendment does not increase the total number of claims, but does increase the number of independent claims from 2 to 6, and does not present any multiple dependency claims. Accordingly, a Response Transmittal and Fee Authorization form authorizing the amount of \$262.00 to be charged to Sidley Austin Brown & Wood LLP's

⁵ Swift, page 1, line 127- page 2, line 5 (emphasis added).


Deposit Account No. 18-1260 is enclosed herewith in duplicate. However, if the Response Transmittal and Fee Authorization form is missing, insufficient, or otherwise inadequate, or if a fee, other than the issue fee, is required during the pendency of this application, please charge such fee to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260.

If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed.

Any other fee required for such Petition for Extension of Time and any other fee required by this document pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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